REMARKS

Claims 1-38 and 50-57 are currently pending. Claims 1-38 are rejected. By the present amendment, the specification has been amended, claims 39-49 have been canceled without prejudice pursuant to a restriction requirement, and new claims 50-57 have been added. Reconsideration of the rejections in view of the above amendments and following remarks is respectfully requested.

1. Claims 1-3, 8, 14 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent Application 0166480 (EPO '480).

Nowhere does EPO '480 teach a system for catalytically treating a gas stream, which comprises, *inter alia, "[a]* gas flow modification means positioned between the impeller and the gas phase reactor for decreasing gas stream velocity and increasing gas flow uniformity" as generally recited in claim 1.

Rather, EPO '480 discloses an exhaust gas silencer-purifier where a combination of gases and air travels passed a converging section (13) and through channel regions surrounding a cylindrical shaped combustion chamber (15) and into an afterburner chamber (14), where a combination of gases and air mix with the exhaust of the combustion chamber (15). In particular, EPO '480 teaches an exhaust gas silencer-purifier having an axial fan (7) and a converging section (13) downstream from the axial fan (7), where the combination of air and gases are mixed with the exhaust from the combustion chamber (15). The Office Action states that section 13 of EPO '480 provides a "venturi tube effect." However, in contrast to the presently claimed invention and as is well known in the art, a converging section within a tube increases the velocity of the gas flow there through, not decreases. Accordingly, the converging section (13) of

EPO '480 would increase the gas stream velocity not decrease the gas stream velocity. Moreover, nowhere in the cited passages or figures of EPO '480 is it disclosed that the velocity of the combined gas actually decreases. Further, if it is the Examiner's position that EPO '480 does disclose the claimed gas flow modification means, the Examiner is respectfully requested to identify with particularity (i.e., by column and line number) wherein EPO '480 such features can be found. Therefore, Claim 1 is believed to be allowable for at least the reasons stated above.

Accordingly, Claim 1 and all claims depending therefrom are submitted to be allowable over the cited reference.

With respect to Claims 2 and 3, it is respectfully submitted that these claims are allowable for additional reasons. For instance, the Office Action asserts that it appears that section 23 also provides a venturi tube effect, and the stream entering the gas phase reactor has a velocity profile exhibiting not more than 10% or 5% velocity deviation from an average gas stream velocity at the upstream end of the at least one catalyst bed. However, section 23 is downstream of the catalysts 20, 21 of the EPO '480 exhaust gas silencer-purifier. Moreover, the Office Action does not point out with particularity any disclosure in the EPO '480 reference which discloses or suggests anything about a velocity profile exhibiting not more than 10% or 5% deviation from an average gas stream velocity at the upstream end of the catalyst bed, as recited in claims 2 and 3. Therefore, it is respectfully submitted that nothing in EPO '480 discloses or suggests applicants' invention as claimed in Claims 2 and 3.

Reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b) are respectfully requested.

2. Claims 1 and 21-23, 31, 34-35 and 38 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yamaguchi (U.S. Patent 5,282,355).

Yamaguchi discloses a catalytic exhaust gas NOx removal system which employs a plurality of nozzles to inject ammonia into the nitrogen oxide containing gas stream. The Office Action states that Yamaguchi discloses a conical transition duct which constitutes a gas flow modification means for decreasing the gas flow velocity. Firstly, the specification of Yamaguchi does not mention a conical transition duct, nor does Yamaguchi mention anything about gas flow velocity or uniformity. While Yamaguchi discloses a mixer 15 in the embodiment shown in FIG. 3, the purpose of the mixer is to mix the ammonia with the exhaust gas (Col. 2, lines 10-15). However, nowhere does Yamaguchi disclose or suggest a system for catalytically treating a gas stream, which comprises, *inter alia,* a gas flow modification means positioned between the impeller and the gas phase reactor for decreasing gas stream velocity and increasing gas flow uniformity as generally recited in Claim 1.

With respect to Claim 21, although Yamaguchi may disclose recycling a portion of the gas stream, Yamaguchi does not disclose recycling a portion of the gas flow stream to a convection section of the furnace located upstream of the axial fan, as generally claimed in Claim 21. Rather, Yamaguchi discloses that a portion of the exhaust gas may be recycled into the NOx removal system 6 that is located downstream from the flue 4, which is located downstream from the turbine assembly 1. In fact, nowhere in the cited passages or figures of Yamaguchi does Yamaguchi disclose an NOx removal having a convection section, much less recycling a portion of the flue gas downstream of the axial fan to a convection section of the furnace located upstream of the axial fan, as generally recited in Claim 21. Therefore, Claim 21 is believed to be allowable over Yamaguchi for at least the reasons as stated above.

Thus, independent claims 1 and 21 and all claims depending therefrom are believed to be allowable over Yamaguchi. Reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b) are respectfully requested.

3. Claims 2-3 have been rejected under 35 U.S.C. §103 as being obvious over EPO '480 for the reasons stated on page 4 of the Office Action.

Claim 4 has been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of Surette (U.S. Patent 5,632,142) for the reasons stated on page 5 of the Office Action.

Claim 5 has been rejected under 35 U.S.C. §103 as being obvious over the applied references (EPO '480 in view of Surette '142) as applied claim 4 above, and further in view of Tyler et al. (U.S. Patent 2,936,846) and Ishikawa et al. (U.S. Patent 5,043,146) for the reasons stated on pages 5-6 of the Office Action.

Claim 6 has been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of Tyler '846 and Ishikawa '146 for the reasons stated on pages 6-7 of the Office Action.

Claims 7 and 18-20 have been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of Yamaguchi (U.S. Patent 5,282,355) for the reasons stated on pages 7-9 of the Office Action.

Claims 9-10 and 12-13 have been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of Balling et al. (U.S. Patent 5,397,545) for the reasons stated on page 9 of the Office Action.

Claim 11 has been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of Carlborg et al. (U.S. Patent 6,534,022) for the reasons stated on pages 9-10 of the Office Action.

Claim 16 has been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of prior art admission for the reasons stated on page 10 of the Office Action.

Claim 17 has been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of Acaster (U.S. Patent 5,709,088) for the reasons stated on page 10 of the Office Action.

Claims 21-24 have been rejected under 35 U.S.C. §103 as being obvious over EPO '480 in view of Yamaguchi '355 for the reasons stated on page 11 of the Office Action.

Claims 25 and 26 have been rejected under 35 U.S.C. §103 as being obvious over the applied references (EPO '480 in view of Yamaguchi '355) as applied to claim 22 above, and further in view of Tyler '846 and Ishikawa '146 for the reasons stated on pages 11-12 of the Office Action.

Claims 25 and 26 have been rejected under 35 U.S.C. §103 as being obvious over Yamaguchi '355 in view of Tyler '846 and Ishikawa '146 for the reasons stated on pages 12-13 of the Office Action.

Claim 27 has been rejected under 35 U.S.C. §103 as being obvious over Yamaguchi '355 in view of Surette '142 for the reasons stated on pages 13-14 of the Office Action.

Claims 30 has been rejected under 35 U.S.C. §103 as being obvious over Yamaguchi '355 in view of Carlborg '022 for the reasons stated on page 14 of the Office Action.

Claims 28-29 and 32-33 have been rejected under 35 U.S.C. §103 as being obvious over Yamaguchi '355 in view of Balling '545 for the reasons stated on pages 14-15 of the Office Action.

Claim 36 has been rejected under 35 U.S.C. §103 as being obvious over Yamaguchi '355 in view of prior art admission for the reasons stated on page 15 of the Office Action.

Claim 37 has been rejected under 35 U.S.C. §103 as being obvious over Yamaguchi '355 in view of Acaster '088 for the reasons stated on pages 15-16 of the Office Action.

With respect to claims 2, 3, 6, 7, 9-13, 16-20, 22-33 and 36-37, the above rejections are based, in part, on the contention that EPO '480 and Yamaguchi '355, singularly or in combination, disclose the elements of claims 1 and 21, respectively. However, since claims 1 and 21 are patentably distinct from EPO '480 and Yamaguchi '355 as described above, each of the above combinations are legally deficient to establish a prima facie case of obviousness because the combinations do not disclose or suggest all of the claim elements.

With respect to claim 21, it is respectfully submitted that, at the very least, the combination of EPO '480 and Yamaguchi '355 does not disclose or suggest the invention of claim 21 as a whole because nowhere does either EPO '480 or Yamaguchi '355, singularly or in combination, disclose or suggest a system for catalytically treating a gas stream, which comprises, *inter alia, "[a]* means for recycling a portion of the flue gas from downstream of the axial fan to a convection section of the furnace located upstream of the axial fan" as generally recited in claim 21.

As correctly noted by the Examiner, EPO '480 does not disclose, *inter alia*, a means for recycling a portion of the flue gas from downstream of the axial fan to a convection section of the furnace located upstream of the axial fan.

Further, as noted above, Yamaguchi does not disclose recycling a portion of the gas flow stream to a convection section of the furnace located upstream of the axial fan, as generally claimed in Claim 21. Rather, Yamaguchi discloses that a portion of the exhaust gas may be recycled into the NOx removal system 6 that is located downstream from the flue 4, which is located downstream from the turbine assembly 1. Indeed, nowhere in Yamaguchi does

Yamaguchi disclose a convection section located upstream from an axial fan. Therefore, Yamaguchi fails to cure the deficiencies of EPO '480.

Accordingly, since the combination of EPO '480 and Yamaguchi '355 fails to disclose or suggest the invention of claim 21 for at least the reasons stated above, Claim 21 is believed to patentable and non-obvious over the combination of EPO '480 and Yamaguchi '355.

Claims 22-38 depend from claim 21. As such, claims 22-38 are believed to be allowable for at least the same reasons as given for claim 21above.

Accordingly, withdrawal of the rejections under 35 U.S.C. § 103(a) is respectfully requested.

The New Claims:

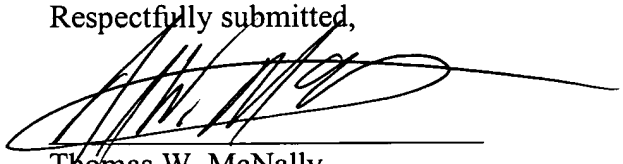
Claims 50-57 have been added to further define the invention and are believed to be allowable for at least the same reasons as their respective base claims 1, 4 and 21.

Amendment to the Specification:

An amendment is made to the Specification to provide updated information regarding a prior filed application describing a MEC catalyst. It is respectfully submitted that no new matter is added by this amendment.

For the foregoing reasons, claims 1-39 and new claims 50-57 as presented herein are believed to be in condition for immediate allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,



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